



Orkot-High Pressure Laminates



Orkot has outstanding physical, mechanical and chemical properties. The product is available in seven basic grades to meet the needs of a wide variety of engineering applications. Typical industries served are aerospace, agriculture, automotive, construction, food handling, marine, mining, and railway.

Typical Applications include:

- Flange bushings
- Sleeve Bushings
- Wear pads
- Spherical bearings
- Thrust washers
- Linear slides

Orkot exhibits low coefficients of friction combined with high compressive strength. This translates into enhanced wear resistance and excellent value over long periods of time.

GRADES:

- TL - Dimensional stability in water, acids and chemical solutions.
- SL - Ideal for general purpose wear pads and bearings.
- RL - Fine weave construction for general engineering components with oil or grease.
- TX - Incorporating a unique low friction composite bearing surface.
- VL - Natural fiber construction, retains mineral oil to avoid re-lubrication.
- HT - Incorporates special aramid bonded with high temperature resin system.
- TLM Marine - Marine grade designed for long life in marine environment with virtually no swell.

PORT PLASTICS, Inc, makes available the following:

- Sheet:** Thicknesses .062 - 2.75
Width 16" max width x 122" max length
- Rod:** Diameter 1/2" -12"
Length 8" - 19" standard
- Tube:** Size ID 1/4" min. OD 60" max.
Length 24" standard

THERMAL PROPERTIES	GRADE		
	TL	HT	TLM
Linear Expansion Coefficients 68 - 212°F (per°F x 10 ⁻⁵)			
(i) parallel to laminate	3-4	1-2	5-6
(ii) normal to laminate	6-7	3-4	9-10
Maximum Operating Temperature °F	266	482	266
Minimum Operating Temperature °F	-26	-	-26
Maximum Operating Temperature in Water °F	212	-	212
Thermal Conductivity (W/mK)	0.293	0.17	.293
Specific Heat (J/kg K)	1.227	-	1.227



Physical & Mechanical Properties

GRADE	RL	SL	TL	TX	HT	VL	TLM
Tensile Strength (lb/sq.in.) (N/mm ²)	7,500 52	5,800 40	8,000 55	8,000 55	8,700 60	8,400 58	10,150 70
Compressive Strength (i) Normal to Laminate (lb/sq.in.) (N/mm ²)	30,000 207	34,000 235	50,000 345	50,000 345	54,800 378	20,000 138	50,325 346
(ii) Parallel to Laminate (lb/sq.in.) (N/mm ²)	20,000 138	14,500 100	14,000 97	14,000 97	14,500 100	8,400 58	13,380 92
Flexural Strength (lb/sq.in.) (N/mm ²)	11,000 76	8,700 60	10,000 69	10,000 69	10,730 74	- -	10,000 -
Flexural Modulus (lb/sq.in. x 10 ⁶) (N/mm ² x 10 ⁴)	0.7 0.48	0.47 0.32	0.47 0.32	0.47 0.32	0.63 0.43	- -	.47 .32
Impact Strength Normal to Laminate (Notched Izod) ft lb/in. BS 2782 & ISO 179-1982	3.0	>10.0	>10.0	>10.0	-	-	>10.0
Shear Strength (lb/sq.in.) (N/mm ²)	12,000 83	8,700 60	12,000 83	12,000 83	- -	- -	12,000 83
Hardness Rockwell M	110	90	100	-	105	-	100
Density	1.25	1.25	1.25	1.25	1.20	1.30	1.30
Swell in Water (% Wall thickness)	-	<0.1	<0.1	<0.1	-	-	<0.1